PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : C12Q 1/68, C12N 15/09, 5/10, G01N 33/566 — A1

(11) International Publication Number: WO 97/06277

(43) International Publication Date: 20 February 1997 (20.02.97)

(21) International Application Number: PCT/US96/12956

(22) International Filing Date: 9 August 1996 (09.08.96)

(30) Priority Data:
08/512,811 9 August 1995 (09.08.95) US

(71) Applicant: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA [US/US]; 22 floor, 300 Lakeside Drive, Oakland, CA 94612-3350 (US).

(72) Inventors: ASHBY, Matthew; University of California, Berkeley, MCB, 401 Barker Hall, Berkeley, CA 94720 (US). RINE, Jasper; 2948 Pine Avenue, Berkeley, CA 94704 (US).

(74) Agent: OSMAN, Richard, Aron; Science & Technology Law Group, Suite 3200, 268 Bush Street, San Francisco, CA 94111-4187 (US).

(81) Designated States: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, ARIPO patent (KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).

Published
With international search report.

(54) Title: METHODS FOR DRUG SCREENING

(57) Abstract

Methods and compositions for estimating the physiological specificity of a candidate drug involve: (a) detecting reporter gene product signals from each of a plurality of different, separately isolated cells of a target organism, wherein each cell contains a recombinant construct comprising a reporter gene operatively linked to a different endogenous transcriptional regulatory element of the target organism such that the transcriptional regulatory element regulates the expression of the reporter gene, and the sum of the cells comprises an ensemble of the transcriptional regulatory elements of the organism sufficient to model the transcriptional responsiveness of said organism to a drug; (b) contacting each cell with a candidate drug; (c) detecting reporter gene product signals from each cell; (d) comparing reporter gene product signals from each cell before and after contacting the cell with the candidate drug to obtain a drug response profile which provides an estimate of the physiological specificity of the candidate drug.